THE

May, 1960

CHEMIST

VOLUME XXXVII

NUMBER 5

**Dr. Max Tishler, F.A.I.C. (right)
Receives Honor Scroll of
New Jersey AIC Chapter from
Dr. Joseph H. Dusenbury**

(See page 157)

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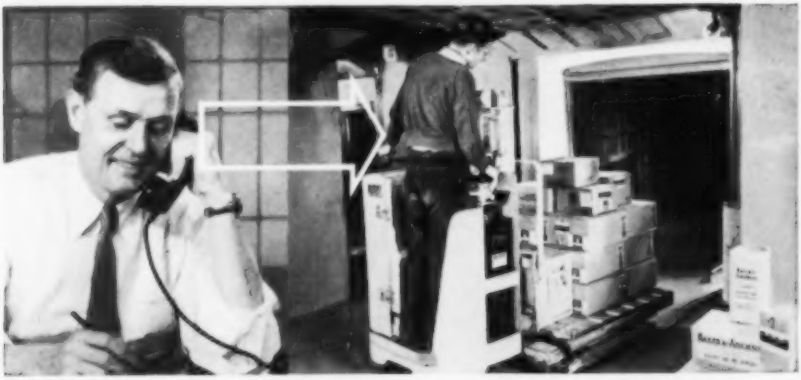

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TO COME IN JUNE

Each year, the June issue carries as many of the papers presented at the Annual Meeting in May as are available. This year, the Annual Meeting will be held May 11-13, at the Radisson Hotel, Minneapolis, Minn. The theme of the meeting is "The Chemist in an Expanding Universe," to be developed by an eminent panel of speakers. Dr. Ernest H. Volwiler, Hon. AIC, who receives the Gold Medal, will accept it with an address on "Scientific Waste." The Hon. Orville E. Freeman, Governor of the State of Minnesota, will be the speaker at the Keynote Luncheon.

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EDITORIAL

The Letter of Recommendation

William S. Auchincloss, O.B.J. Fraser and Lawrence Flett, Chairman

AIC Committee on Employer-Employee Relations.

OVER the past twenty years, the hiring of talented chemists has become increasingly difficult and costly. For some organizations the average cost of employing a technical man may run from $1000 to $3000. If the chemist fails to meet expectations or if the company fails to place him where he can do productive work, the cost is impressively higher.

For this reason, great care must be used in the selection of men. A commendable effort has been made to acquaint chemists with the opportunities in an organization and then to appraise their probable success and usefulness to the group.

The "Letter of Recommendation" has become one of the standard means of appraising a man. Therefore its purpose should be understood and its inhumane misuse avoided.

The AIC believes that every one of its members can be useful if properly placed. A "Letter of Recommendation", to be helpful, should:

(1) Assure the prospective employer that there are no unusual problems concerning the man, particularly if he has been discharged;
(2) Advise concerning the man's capabilities and limitations;
(3) Give information concerning the fields in which he is best qualified to work.

Such information not only assists in the appraisal of the man, but it is useful in placing him where he can be successful.

The letter should not be used as a means of persecution because of any animosity generated by a difference in political, social or religious views. It is not difficult to keep a man out of the greener pastures in the chemical field by the simple use of such descriptive words as "maladjusted," "uncooperative," "disagreeable," "stubborn," etc. While the man should not have discussed personal views in business, his superior should not have discussed them either. Such problems are more effectively and more humanely solved by friendly advice rather than by the ugly means of ruining a man's professional career.

It would be a mistake to avoid the frank exchange of useful information about a prospective employee, but it should not go entirely uncontrolled. In most organizations, even in those which exercise careful control of company correspondence, the letter of recommendation is written by a man's former superior and is sent out unchallenged.

Companies should understand that one man sending out damaging information can brand them as a bad

risk for any prospective employee whose career might be ruined in spite of his technical ability.

The Committee on Employer-Employee relations makes the two following suggestions to avoid heartbreaking situations from uncalled for and unfair recommendations:

(1) Chemical organizations should establish policies with respect to the recommendations of former employees. These policies should be made known to all supervisors.

(2) Every letter of recommendation should be approved by the immediate superior of the man writing the letter, to ascertain that it conforms with the organization's policies.

Special AIC Announcements

Washington Chapter Award

The Washington Chapter will award its Honor Scroll to Dr. Archibald T. McPherson, associate director, National Bureau of Standards, particularly for his contributions to the young people of the Washington area. The presentation will be made on the evening of May 24, at the Army-Navy Club, Washington, D.C. The principal speaker will be Mr. Keith Johnson, scientific advisor to the Washington, D. C. School System. AIC President, Dr. Wayne E. Kuhn, will present the award.

Meeting of Committees on Membership and New Chapters and Expansion

A breakfast meeting of the Committees on Membership and New Chapters and Expansion is scheduled for Thursday, May 12, at 8:00 a.m., at the Radisson Hotel, Minneapolis, Minn., in Room 115, the mezzanine, near the AIC Registration Desk. Cost $2.00. This will be an open meeting to which all AIC members who are interested in the establishment of new chapters and the expansion of the AIC will be welcome.

To All Chapter Treasurers

We have received several inquiries about dues rebates. Starting with May, 1959, the beginning of the fiscal year, Chapter rebates on dues were increased to $1.25 for Fellows and $1.00 each for Members and Associates. In December 1959, the rebates to Chapters for new members were set at 40% of the first year's dues, retroactive to May 1, 1959.

Dues rebates are paid to Chapter Treasurers in June and November. In November 1959, the dues rebates on new members brought in between May and October were paid at the rate of $1.25 for Fellows and $1.00 for Members or Associates. The difference between these amounts and 40% of the new members' dues will be included in the rebates to be paid in June 1960.

New Jersey Chapter Elects Officers

The following officers, to serve for the 1960-1961 fiscal year, were announced at the April 20 meeting of the New Jersey AIC Chapter:

Chairman, Dr. John F. Mahoney, Manager, Technical Service, Merck & Co., Inc., Rahway, N.J.

Chairman-elect, Dr. Frederick A. Lowenheim, Metal & Thermit Corp., Research Laboratory, Rahway, N.J.

Secretary, Dr. Ralph M. Hill, Esso Research & Engineering Co., P.O. Box 51, Linden, N.J.

Treasurer, Dr. Curt Bamberger, Research Chemist, Patent Chemicals, Inc., Paterson, N.J.

Representative to National Council, Dr. Joseph H. Dusenbury, Assistant Director of Research, Textile Research Institute, Princeton, N.J.

Councilors for 3-year terms: Chester A. Amick, Dr. D. L. Cottle, Dr. R. W. McLachlan, Dr. Stephen E. Ulrich.

Councilors for 1-year terms: Dr. Max Bender, Dr. W. L. Davidson, Theodore R. Donlan, Dr. H. R. McCleary.

The 200 Club Expands

The 200 Club, composed of AIC members who will each try to bring in ten new members to the AIC, now numbers 209. The newest additions are:

Clifford L. Ayers, F.A.I.C., Elizabeth, N.J.; Dr. Joseph H. Dusenbury, F.A.I.C., Princeton, N.J., Henry Harrison, F.A.I.C., Bristol, Conn.; Dr. Ralph M. Hill, F.A.I.C., Linden, N.J.; Dr. John F. Mahoney, F.A.I.C., Rahway, N.J.; Dr. William M. McGavock, F.A.I.C., San Antonio, Tex.

New Tennessee Chapter Elects Officers

The new Tennessee Chapter held an initial meeting, March 6, and elected Dr. Gus A. Ropp, research chemist, Chemistry Division, Oak Ridge National Laboratory, as chairman, and Dr. Charles A. Horton of Union Carbide Nuclear Co., Oak Ridge, as secretary-treasurer. Dr. P. S. Baker, organizer of the Chapter, states that a Constitution and By-laws Committee will be appointed to prepare the constitution and by-laws in anticipation of an early charter presentation meeting.

Professional Appointments

May 5, 1960. Philadelphia, Pa., Engineers' Club. Meeting of Philadelphia Chapter. Annual Student Award night. Outstanding senior students in chemistry and chemical engineering in colleges and universities in the area will be presented awards. Dinner, 6:30 p.m. Presentation of awards, 8 p.m. Speaker Dr. Harlan L. Tuthill, Assistant Director of Research & Development, Smith, Kline & French Labs., Philadelphia, Pa. Subject: "Opportunities for Chemists and Chemical Engineers in the Pharmaceutical Industry." Ror reservations: Dr. E. M. Kipp, Foote Mineral Co., Berwyn, Pa. (NIagara 4-6800).

May 11, 1960. Minneapolis, Minn. Radisson Hotel. The AIC President's Reception to the Officers, National Councilors, Members of the Annual Meeting Committee, and their wives 5:00 p.m.

May 11, 1960. Minneapolis, Minn. Radisson Hotel. Dinner Meeting of the AIC National Council and Board of Directors. Board meets at 6 p.m., Council at 6:30.

May 12-13, 1960. Minneapolis, Minn. Radisson Hotel, 37th Annual Meeting. The Twin City Chapter will be our

host. (See Program in April issue of THE CHEMIST.)

May 13, 1960. Minneapolis, Minn. Radisson Hotel, Room 115. Breakfast meeting, 8:00 a.m., of National Council and Board of Directors of the AIC.

May 14, 1960, Orlando, Florida. Cherry Plaza Hotel. Joint luncheon meeting of Florida Chapter with the Florida Section of the American Chemical Society. Speaker: Andrew H. Hines, Jr., Director, Area Development Department, Florida Power Corp., St. Petersburg, Fla. Subject: "Personal Responsibilities of Professional People." For Reservations (Luncheon $2.40): Robert A. Nanz, Florida Chemists & Engineers, Inc., 645 Rugby Ave., Orlando, Fla.

May 18, 1960. Plainsboro, N.J. New Jersey Chapter. Plant Tour of Industrial Reactor Labs., Inc. For information, Dr. Ralph M. Hill, Esso Research & Engineering Co., P.O. Box 51, Linden, N.J.

May 24, 1960. Washington, D. C. Army-Navy Club, Farragut Square & I St., N.W. Presentation of Honor Scroll Award to Dr. Archibald T. McPherson. Associate Director, National Bureau of Standards. Principal speaker: Mr. Keith Johnson, Scientific Advisor to the Washington, D.C. School System. For information: Dr. Anthony M. Schwartz, Harris Research Labs., 1246 Taylor St., N.W., Washington 11, D.C.

May 26, 1960. Los Angeles, Calif. Meeting of Western Chapter. Student medal awards to outstanding senior students will be presented. For information: Norman F. Johnston, 3020 San Juan Drive, Fullerton, Calif.

June, 1960. (Day to be announced.) **Minneapolis, Minn.** Meeting of Twin City Chapter. Award of student medals. For information: Dr. Joseph F. Abere, Minn. Mining & Mfg. Co., 2301 Hudson Rd., St. Paul 6, Minn.

June 7, 1960. Meeting of Niagara Chapter. Student Medal presentations. For information: Dr. Howard W. Post, Chemistry Department, University of Buffalo, Buffalo 14, N. Y.

June 8, 1960, Chicago, Ill., Prudential Building, Beaubien Room. Meeting of Chicago Chapter. Social hour, 6:00 p.m. Dinner 6:30. Business meeting and announcement of new officers. Panel Discussion on "The Social Responsibilities of the Chemist" Participants include Dr. Robert Marshner, Standard Oil Co. of Indiana, on the responsibilities of the chemist to the community, and Dr. Joseph Katz of Argonne National Laboratory, on the responsibilities of the chemist with respect to the effect of his inventions on the country and the world. For information, David W. Young, Sinclair Research Labs., 400 E. Sibley Blvd., Harvey, Ill.

May 11-12, 1961. Washington, D. C. Statler Hotel, 38th Annual AIC Meeting. The Washington Chapter will be our Host.

The American Chemical Society and IBM Corporation have devised an "electronic editor" (a computer) to index scientific articles in worldwide chemical journals. The semimonthly publication is named, *Chemical Titles,* and provides an indexed bibliography of recent literature.

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I Must Vigorously Protest!

Dr. Max Tishler, F.A.I.C.

President, Merck, Sharp & Dohme Research Laboratories, Rahway, N.J.

(Presented when the author received the Honor Scroll of the New Jersey AIC Chapter, April 20, 1960, at Newark, N.J.)

UNTIL a few days ago, it had been my intention to discuss "The Chemist in Medicinal Research." I had planned to describe the important role of the chemist in the research team devoted to health and to the search for new methods of controlling disease, and to illustrate his activities by some of the medical accomplishments of the past 25 years. Events of the past week have compelled me to change my subject.

You are aware of the preoccupation of the Kefauver Committee in Washington with the pharmaceutical companies, initially to investigate something called administered pricing and subsequently expanded into charges of collusion, price gouging, unfair advertising and other abuses. This hearing has been given widespread press coverage.

When this investigation was scheduled, most of the pharmaceutical companies accepted it as responsible citizens. We believed we had an honorable story to tell Congress and the people and that our contributions to the health and welfare of our Nation far outnumbered our deficiencies. We were prepared for a fair investigation recognizing that our rapidly growing industry was reaching maturity and that some of the features characteristic of our adolescence needed to be corrected. We were a proud group, since we believed that through the American free-enterprise system we had helped to build over a period of 25 years the greatest health team that the world has ever seen. Achievements in medicinal chemistry, brought about largely through industry's research, had given us in the industry an almost religious confidence in our ability to tackle and solve through research some of the most baffling, unsolved diseases which plague mankind. We had the conviction that our pharmaceutical industry with its research and development know-how was one of this country's greatest assets, particularly in this period when the international image of our scientific superiority is being seriously questioned.

It is not my purpose to comment on the Kefauver charges of exorbitant prices of drugs to the public. I leave this question to those experts in economics and to the business leaders of our industry. However, there is one part in the industry's story to Congress on drug costs which directly concerns research; namely, the cost of doing research and the quality of in-

dustry's research.

Research and development expenditures in the drug industry were reported to be about $190,000,000 in 1959 and are estimated to exceed $200,000,000 in 1960. The cost of doing this research and development must be paid out of income, for industry has no endowment or an endless cornucopia of wealth. This simple fact of economics is not a serious issue of the Kefauver Committee, but during its hearings charges have been made that research done by our pharmaceutical industry is negligible and tainted. Allegations have been made by some witnesses that most of the important discoveries in medicinals were made in foreign countries or in non-industrial laboratories and not in the laboratories of the American pharmaceutical companies. Far from leading in drug research, it is alleged that the American pharmaceutical industry has usually followed, and often only after a definite lag. The critics go on to claim that much of the laboratory work done by the pharmaceutical companies is centered on exploiting and marketing of foreign discoveries.

These charges have been demoralizing to those of us who have devoted our lives to research in the pharmaceutical industry. Suddenly, our scientific dedication and motives are challenged. We are dismissed in a manner that makes us appear as charlatans; unscientific, and undedicated.

I am not easily led to a point of indignation but at this time I am rightfully moved to that emotion. I am indignant because of the unfair criticism of people whom I know to be dedicated, sincere scientists whose motives are actuated by the impelling desire to help mankind. When our ethics, purpose and accomplishments are impugned, then I, as a man of science, have not only the right but the responsibility to speak out for the facts. This duty transcends all commercialism! As a member of the Nation's scientific community and as a spokesman for the scientists in the pharmaceutical industry, I must vigorously protest against the irresponsible and degrading criticisms leveled at us.

In making my protest, I speak from my own experience with scientific people in my company who are earnestly looking for new and better ways to treat *maladies* and not to create *markets*. Our scientific people recognize that our research is supported from the income we make and yet they have come to our laboratories from the universities with the conviction that our methods of "objective research" provide the best opportunities for the conquest of diseases through drug therapy. Basically, within Merck & Co., Inc., our research programs are selected by our research people. The manner in which we prosecute our research and the decisions needed in its operations rest essentially

with the research organizations. Although our programs of research are approved annually by top management, I say with complete honesty that never has a research proposal of any magnitude sponsored by our research organization been significantly altered or refused by management or because of marketing considerations. It is the people in Merck's research—the chemist, the biologist, the pharmacologist, and the physician in charge of clinical research — who discover new drugs; who determine through objective experimentation whether a drug is effective and safe; who decide whether a drug is a worthwhile contribution to the armamentarium of the physician; who conclude whether it is medically suitable for marketing; who judge when it is ready for marketing consideration and who establish what can be said to the practicing physician. These are the responsibilities given to the Research Division in our company by our top management. If a drug does not measure up to the high standards of good medicine, we in Research must take the blame.

Actually during the 10-year period from 1949 to 1959, the Merck Sharp & Dohme Research Laboratories spent $111,000,000 for research. There were years in this period when we did not offer to our marketing organization a single new basic compound for distribution. This was our situation, in spite of the number of promising compounds that were being studied in the clinics after long periods of research in the laboratories. When the clinical data for these promising compounds were examined by our Medical Research people, we concluded that none of these met our standards and concepts of a drug with distinction.

Let us review some accomplishments of the past 25 years and remind our critics to count their blessings. I quote from a paper which appeared in the *Journal of the American Medical Association* in 1956, written by Dr. L. H. McDaniel, then chairman of the Section of General Practice of the AMA. In reviewing his 33 years of medical practice, Dr. McDaniel stated:

> "I remember the reluctance with which I viewed the approaching winter, for I knew that before spring 15 patients, including several close friends, would die from pneumonia . . . Then we felt helpless, but today, we can walk into the sickroom with confidence, knowing that often a little ampule or vial the size of one's thumb contains drugs that can conquer diseases formerly thought hopeless."

It was not so long ago that the many infectious diseases in addition to pneumonia stuck mortal fear within us. Some of us can remember when tuberculosis meant a lingering doom; when septic peritonitis was common and fatal; when bacterial endocarditis was certain death; and when all forms of bacterial meningitis and septicemias were spoken of with fervent prayers. It was not so long ago that our knowledge of nutrition was meager; when pellegra was not un-

common in our country; when pernicious anemia was a killer; when the terms beri beri, scurvy, and rickets were part of a layman's vocabulary. Today, our medical students learn of most of these deficiency diseases not from the clinics but only from textbooks.

Before the early thirties, the American pharmaceutical companies were actually enlarged apothecary shops which, in contrast to their European counterparts, did little of what we now call research. In fact, most of the important drugs used in America up to 1935 were the result of research in foreign laboratories. Today, the situation is significantly reversed. The productivity of our research laboratories has profoundly affected medicine in almost every country. In world affairs the American pharmaceutical industry has become one of our greatest resources of good will.

Modern research in the American pharmaceutical industry began in the decade beginning with 1930. During this period, Parke Davis, Merck, Lilly, Abbott, and Squibb, established research organizations with new concepts and new dimensions. They brought together under a single roof scientists of many disciplines, all needed to carry out programs of research from the conceptual stage through clinical evaluation. Men and women of different training — chemists, pharmacologists, pathologists, and physicians — joined together for the first time in seeking solutions to medical problems. This was a new concept of research, for until then research was reserved for the individual investigator in the university and the institute, often isolated, and because of this, frequently ineffective.

This was the beginning of interdisciplinary research about which we hear so much today in government-sponsored research programs. It is not uncommon today to find in our industry that 50-100 technically trained research people have had some part in creating a useful therapeutic agent. No other research organization in the U.S. devoted to health, whether it be the university, the institute or government laboratories, has this capacity. It is through such organization of research that the pharmaceutical industry in the U.S. has had a significant effect on the science of therapeutics.

None of the experts would question the superiority of today's therapeutics over those of 1935. Let us remember that the term *miracle drug* was not the invention of the pharmaceutical industry. It was the doctor, the public, and the press who acclaimed the *miracle drugs* of modern chemotherapy. Our memories are short. We have forgotten what it was like before the advent of the drugs we now have. Who would want to turn his back on our present armamentarium and rely

solely on the therapeutics of 25 years ago?

What are some of the achievements which have originated in the laboratories of the American pharmaceutical industry during this short space of 25 years? No one can deny the contributions of the industry in the field of the vitamins. It was largely through its research and development that a number of the vitamins were first isolated and characterized and that economical production of most of the important ones originated in this country. From these laboratories came also such important therapeutic agents as *Benadryl,* the first antihistaminic available to the general practitioner; the first uricosuric agent, *Benemid* for the treatment of gout; Cortisone and its analogues, for the treatment of rheumatoid arthritis and a host of other diseases; Diamox, the first carbonic anhydrase inhibitor which had importance in medicine; *Diuril* and its analogues for the control of edemas related to coronary failures and hypertension; the broad spectrum antibiotics, chloromycetin and the family of tetracyclines; the antibiotics Erythromycin and Novobiocin; pyrazinamide and isonicotinyl hydrazide for the treatment of tuberculosis; the less toxic and more versatile sulfa drugs; *Nilevar,* the first oral anabolic agent; Meprobamate for mental health; and drugs such as *Cogentin* for the control of Parkinsonian syndrome. This is only a partial list, and but one part of the record for the past 25-years.

The second part of the industry's record is derived from the collaboration between the scientists of our laboratories and those of the universities, institutes, and hospitals. We at Merck are proud of our collaborations with outside investigators, since six of them later became Nobel Laureates.

Now what has this collaboration between the academic and industrial scientists meant? Streptomycin might have remained a laboratory curiosity, or its availability as a drug delayed a number of years, had not Dr. Waksman sought the collaboration of research and development in the pharmaceutical industry. Insulin, in a form suitable for the treatment of diabetics, resulted from a collaboration between the Lilly research staff and the discoverers of insulin, Banting, McLeod, Best, and Collip. From such collaborations have also come the female sex hormone, estrone; such vitamins as B-1 and pantothenic acid; *Dilantin* for epilepsy; *Nystatin* for fungal infections; the thiouracils for hyper-thyroidism and *Nalline* for morphine addiction and morphine poisoning.

It is in this area — the collaboration area — that our critics often forget industry's paramount contribution. In some of these collaborations, our contributions are clearly research in nature; in others develop-

mental, and in still others a combination of both. Unless an organization pursues the development of a new therapeutic agent, the agent is worthless. Unless the physician has the agent available to him in effective dosages and useful formulations, his patients must do without it. Until the industry learned how to make an injectible form of vitamin K-1, dicoumarol therapy, a life-saving method in many instances of coronary thrombosis, was too hazardous for wide spread use.

The ability to collaborate and move quickly in research and in development is a priceless attribute of the industry for one cannot put a price on the urgency of saving lives or combating illness and relieving pain. Penicillin, discovered by the British, undoubtedly would have been delayed for the whole of world War II had not the American pharmaceutical industry applied its research and development resources when it did. The great rapidity with which Salk's polio vaccine and the Asiatic flu vaccine were made available to physicians can only be measured in terms of people saved.

It is senseless for anyone to charge that laboratory discoveries alone constitute the reason for the existence of research and to say that scientists who carry a discovery from someone else's test-tube to a useful drug have contributed nothing. Is it correct to say that the German physicists who demonstrated nuclear fission in the '30's should receive the credit for atomic energy? Certainly, everyone recognizes the contributions of those who worked on the Manhattan project. As a matter of fact, the names we best remember in connection with the atomic project are Fermi and Oppenheimer and not Meitner, Hahn and Strassman.

The pharmaceutical industry today is characterized by the tremendous influx of new drugs and by obsolescence of the older ones. We have been criticized for this. Why does this constant change of drugs occur? The answer is the intense activity that exists in the research organizations of the pharmaceutical companies. We think of this as competition but actually the motive is the intense desire to produce a better drug.

There is no drug in existence that is completely satisfactory — that cannot be improved upon from the standpoint of effectiveness, reliability or toxicity. Even penicillin, considered at one time an almost ideal drug, has its failings. Some patients cannot tolerate it because of the dangers from anaphylactic shock. Some physicians are expressing alarm at the growing number of fatalities resulting from infections of penicillin-resistant staphylococci. The need for improved antibiotics is obviously imperative. The need for improved products in other fields of therapy is just as important. This is why during the past ten years, newer drugs have appeared in the

fields of steroid therapy, hypertension, mental and cardiovascular diseases. You may expect that still more drugs will appear as even better ones are discovered.

Now you can well understand why I changed the title of my paper and why I am exercised by the events in Washington. I speak on this subject as a research chemist and not as an official of a pharmaceutical company. I speak in the name of scores of thousands of research chemists who have made a career for themselves in industry. We have made this our career for many reasons beyond the need for a means of livelihood — a dedication to science, a desire to create and, not least of all, a desire to contribute something of importance to our way of life.

This is true in every field of chemical research, whether it be research in heavy chemicals, petroleum, steel, coal, food chemistry, or the pharmaceutical industry. The feelings of creating and contributing are important factors in the morale, enthusiasm, and dedication we bring to the every day performance of our jobs. Factors such as these spell the difference between inspired work and just doing a job.

If, as Mr. Kefauver and a number of the drug experts who spoke critically of our accomplishments would have us believe, the result of the tremendous research and development efforts which have gone into the pharmaceutical field has been to defraud the public, to swell the coffers of the companies and to exact merciless tribute from the infirm and the aged — it is a sad commentary on the meaning of the thousands of man years of dedicated effort by thousands of chemists, engineers, biologists, and physicians throughout this country.

Irresponsible attacks on motives and ethics of scientists can be irretrievably appalling to their morale. Irresponsible indictment of the best efforts of such an important segment of our scientific and technological manpower can have serious consequences in decreasing the sources of scientific manpower and on the youth of our country who see an expression of their idealism in the accomplishments of chemistry, biology, and medicine during the past 25 years. Toward these dangers, our critics must take a responsible attitude. Those who have gone to such lengths to degrade the medical accomplishments of the American pharmaceutical industry must be made to realize the extent of the damage they cause and be willing to take the responsibility for it.

I cannot believe that some of our scientific critics at the Washington hearings really meant what they said. I question whether the views they expressed represent their overall assessment of research in the drug industry. Could it be that they failed to appreciate the seriousness of giving their views in such a pre-emptory

manner, not reflecting sufficiently on the importance of adequate perspective when expressing their views in the public spotlight?

I had a special reason for bringing this unpleasant issue to you. Having been a member of the AIC for over ten years, I know of its aims and purposes. Each of us has deep convictions about the ethics, motivations, and dedication which make up the profession of chemistry. We know that if the scientific integrity of one group of dedicated scientists is attacked with impunity, then the dignity of all science will become degraded. If one group of scientists can be tarred and feathered without vigorous protest, then we are all slandered.

I hope that I have conveyed an appreciation of the seriousness of our situation and the obligations each of us has to defend the rightful position of the research scientist in the industrial and scientific development of the Nation. I hope each of you is equally indignant over this challenge to our scientific profession and that each of you will make yourself heard in words and deeds.

Max Tishler— Dedicated Scientist

John T. Connor

President, Merck & Co., Inc., Rahway, N.J.

(Presented when Dr. Max Tishler received the Honor Scroll of the New Jersey AIC Chapter, April 20, 1960, at Newark, N.J.)

"Let your light so shine that those who seek the truth, that those who toil that this world may be a better place to live in, that those who hold aloft the torch of science and knowledge though these social and economic dark ages, shall take new courage and feel their hands supported."

GEORGE W. MERCK spoke these words when he dedicated the new Merck Research Laboratories in 1933, four years before Dr. Max Tishler left his post as an instructor in chemistry at Harvard University to accept employment with Merck & Co. Yet the spirit of those words, and their substance, were of great importance to the young Dr. Tishler, and were of particular significance when Mr. Merck personally persuaded him to leave his close association at Harvard with Dr. James B. Conant. In fact, those words have well expressed Dr. Tishler's philosophy of work, and even of life, ever since.

It goes without saying that Max Tishler is a most unusual man. Your society has recognized that in selecting him to receive your Honor Scroll. I am sure that in making your selection you considered his warm and enduring qualities as a human being, as well as his outstanding record of scientific and administrative achievements.

Those of us who have had the opportunity to work closely with him, day in and day out, over an extended period of time, are in a particularly good position to affirm that you have made a wise choice. Not only has Dr. Tishler had an outstanding record to date, but his rather unusual qualities of mind and spirit give promise of even greater future contributions to the welfare of his fellow man. He is not content to rest on his laurels, and he certainly does not spare himself physically. He works such long hours that he is the despair of his lovely wife, Betty, and his two fine sons, of whom he is so proud, as well as his business and professional associates.

He is humble enough to recognize that he does not know all the answers; he is broad-minded enough to listen to people around him who seem to have a good idea; he is wise enough to seek out new ways of doing things, and he is courageous enough to support other people with good ideas even when it is unpopular to do so.

Following full consideration and discussion with our close advisers several years ago, Henry Gadsden and I recommended to the Board that Dr. Tishler be named head of our newly united Merck Sharp & Dohme Laboratories. We did so with full realization that he had a lot to learn about general management techniques and responsibilities, although he had a well-deserved reputation for getting things done when he considered them important enough. But others of us at Merck also had a lot to learn about general management techniques, and still do, and we were more than willing to share our experiences with each other. We recognize that, in the management of business activities, as well as in life generally, we all can strive for excellence, but we should not expect perfection.

I am happy to be able to say that Max Tishler has lived up to our fondest expectations, as a person, and as a leader of a scientific research organization composed of many competent and outstanding individuals, many of whom have received awards for their own scientific achievements in which Dr. Tishler's support and backing have been in part responsible. As a member of our top management team he contributes in a most constructive way to our thinking on problems far beyond the limits of his scientific functional responsibilities.

Now for vital statistics: Max Tishler, born in Boston in 1906, was educated at Tufts University where he received his B.S. degree *(magna cum laude)* after being elected to Phi Beta Kappa. He went on to Harvard where he was elected to Sigma Xi and earned the degrees of M.S. and Ph.D. Serving first as Austin Teaching Fellow, he later was research associate with the late Elmer P. Kohler and afterwards instructor in chemistry at Harvard.

Joining Merck & Co., Inc., as re-

search chemist in 1937, he became successively section head, director of developmental research, vice president of scientific activities, and president of Merck Sharp & Dohme Research Laboratories. In his rapid progress from research chemist to president of our research laboratories, Dr. Tishler made internationally acclaimed scientific contributions in about 100 scientific papers describing research work in fields such as synthetic vitamins, amino acids, sulfas, antibiotics, coccidiostats, and cortical steroid hormones. A good part of this work was in the form of original contributions for which more than 100 U.S. patents bearing Dr. Tishler's name, as well as his collaborators, have issued.

In addition, Dr. Tishler collaborated with Dr. J. B. Conant (Hon. AIC) on the text *Chemistry of Organic Compounds,* and with Nobel Laureate S. A. Waksman on the monograph entitled, *Streptomycin.*

He has received other awards and is a member of scientific organizations too numerous to mention.

Max, I am delighted to join with your many other friends and associates in recognizing your outstanding accomplishments. I can only urge you to remain true to your own high standards and ideals, and to continue to dedicate your efforts to the betterment of the welfare of your fellow man.

Presentation to Dr. Tishler

Dr. Max Tishler, F.A.I.C., president, Merck Sharp & Dohme Research Laboratories, Rahway, N.J., received the Honor Scroll of the New Jersey AIC Chapter, April 20, at a dinner meeting held at the Military Park Hotel, Newark, N.J., preceded by a reception sponsored by Merck & Co., Inc.

Dr. Joseph H. Dusenbury of Textile Research Institute, Princeton, chairman of the Chapter, presided. He introduced Dr. Wayne E. Kuhn, AIC president, who spoke briefly on the purposes of the AIC.

Dr. Tishler was introduced by Mr. John T. Connor, president of Merck & Co., Inc. Dr. Dusenbury presented the Scroll. Dr. Tishler responded with a timely address protesting the irresponsible and degrading criticisms leveled at dedicated research chemists during the Kefauver Committee hearings in Washington. (See preceding pages.)

Student medals were presented to the following outstanding seniors in New Jersey Colleges:

Miss Joan Ann M. Budz, Douglass College. Faculty sponsor, Prof. Roger Sweet.

Richard Meinzer, Drew University. Faculty sponsor, Prof. Donald A. Scott.

Jack Griffel, Newark College of Engineering. Faculty sponsor, Prof.

Everett S. Wallace for Prof. Richard K. Hill.
Joseph M. Landesberg, Rutgers University. Faculty sponsor, Dr. Ronald Sauers.

The citation on the Honor Scroll reads:

To Dr. Max Tishler

In recognition of his Professional activities in local and national organizations concerned with the interest of Science; for his devotion to improvement in the stature of chemists; for his contribution to government advisory committees; and for his leadership in research from which came new weapons for the conquest of disease.

The Patent Office announces that patents are being issued at the rate of 900 to 1000 each week, and patent applications are being received at the rate of 350 each working day. A total of 46,937 patents were issued during 1959—one to every 3,808 persons. However, in the State of Delaware, an average of one patent was issued to every 1,205 persons.

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The 11th Annual Testing Conference sponsored by TAPPI, 360 Lexington Ave., New York, N. Y. will be held Sept. 27-29, 1960, at the Pantlind Hotel, Grand Rapids, Michigan. **W. R. Willets,** F.A.I.C., of Titanium Pigment Corp., New York, N. Y. is general program chairman.

The Gordon Research Conferences

Dr. W. George Parks, Hon. AIC, Department of Chemistry, University of Rhode Island, Kingston, R. I., is director of the Gordon Research Conferences. Dates and subjects are listed below. Conferences numbered (1) will be held at Colby Junior College, New London, N. H. Conferences numbered (2) will be held at New Hampton School, New Hampton, N. H. Conferences numbered (3) will be held at Kimball Union Academy, Meriden, N. H.

July 13-17
- (1) Petroleum — Friction, Lubrication and Wear.
- (2) Chemistry of Coal.
- (3) Lipide Metabolism.

June 20-24
- (1) Elastomers — Structure and Properties.
- (2) Information Processing for Critical Tables of Scientific Data.
- (3) Cell Structure and Metabolism-Secretion.

June 27-July 1
- (1) Nuclear Chemistry.
- (2) Proteins and Nucleic Acids.
- (3) Physical Metallurgy — Relation of Structure and Properties.

July 4-8
- (1) Polymers.
- (2) Chemistry and Physics of Isotopes.
- (3) Chemistry at Interfaces.

July 11-15
- (1) Textiles.
- (2) Statistics in Chemistry and Chemical Engineering.
- (3) Chemistry, Physiology and Structure of Bones and Teeth.

July 18-22
- (1) Corrosion.
- (2) Radiation Chemistry.
- (3) High Pressure Research.

July 25-29
- (1) Separation and Purification.
- (2) Organic Reactions and Processes.
- (3) Chemistry and Metallurgy of Semiconductors.

Aug. 1-5
- (1) Instrumentation.
- (2) Steroids and Other Natural Products.
- (3) Solid State Studies in Ceramics.

Aug. 8-12
- (1) Food and Nutrition.
- (2) Organic Coatings.
- (3) Chemistry and Physics of Solids —Point Defects.

Aug. 15-19
- (1) Medicinal Chemistry.
- (2) Analytical Chemistry.
- (3) Toxicology and Safety Evaluations.

Aug. 22-26
- (1) Catalysis.
- (2) Inorganic Chemistry.
- (3) Infra-red Spectroscopy.

Aug. 29-Sept. 2
- (1) Cancer.
- (2) Adhesion.
- (3) High Temperature Chemistry

The Path to Professionalism

Elton Fisher

Editor, SOUTHERN CHEMIST, (ACS Southern Sections Publication)
P.O. Box 6351, East Station, Memphis 11, Tenn.

(This fine article appeared as an editorial in the February 1960 issue of the *Southern Chemist.* It is reprinted here for its thoughtful consideration of professional subjects. However, the discussion of Ethics does not apply to AIC members, who are bound by a Code of Ethics; enforced by our Committee on Ethics.)

THE question of professional status is a matter of serious concern to chemists. Some insist that we are professional people, and they cite court decisions to prove it. Others rightfully tell us that the decision of a court cannot create public respect for any group and that true professional status can spring only from public recognition and respect. Still others cry out that we do not have professional status and can *never* attain it because:

> Most of us work with things and do not minister directly to the public in the manner of teachers, lawyers, physicians, and surgeons.
>
> The majority of us work for salaries and do not receive fees for our professional services.
>
> We enter the practice of chemistry with varying levels of academic training rather than after completing a "set and standard course of study."
>
> We do not conduct ourselves with the dignity expected of members of a profession.
>
> Our rules of professional ethics are defined too loosely.
>
> We have no means of enforcing professional discipline.

Let us examine these objections in a critical manner and see how many of them we can disqualify or prove to be of no consequence. While doing this, let us go further and see if remedies are available for those objections that we cannot toss out.

Does Working With Things Disqualify Us?

It is a fact that most of us work with things rather than with people —exceptions being consultants, those working in sales, management, supervisory positions, and public relations. As a consequence the public has little first-hand knowledge of what we do and how our work affects all people. Who is responsible for this state of ignorance about our activities? It must be the fault of the public. Surely the fault cannot be ours. We have no duty to educate the public about our work—*or do we?*

For well over four decades Otto Eisenschiml (F.A.I.C.) has been telling us that it is absolutely necessary for us to inform the public about our work and its effect on the health, happiness, and general welfare of all the peoples of the world. Our obdurate and continued refusal to take this advice is unbelievable. Perhaps Eisenschiml did not hit us hard enough to get our attention. One wag suggested that we chemists, like mules,

must be rapped between the ears with a 4"x4" before we realize that we are being addressed. Another suggested that since Dr. Eisenchiml's advice is free we are so gullible as to assume that it is worth only what it costs us. Regardless of our reasons, or lack thereof, we cannot hope to receive public recognition as professional people until we make an all out effort to enlighten the public about our work and about chemists as people.

It is no better than so much hog wash for us to tell our fellow citizens that chemistry has given them this, that, or the other. We must adopt an *Eisenschimlism* and tell them the thrilling stories about the chemists whose work made these things possible.

A recent event in Memphis stands in sharp contrast to the usual American custom of "Glory to Chemistry, Anonymity for Chemists." Maurice Frejacques was honored by W. R. Grace & Co. for his outstanding work on the chemistry of urea. Dr. Frejacques was guest of honor at functions held at a leading country club and at Grace's Memphis plant. These activities which were attended by many civic and business leaders, received international publicity ranging from reports in technical and trade magazines to pictures on newspapers' society pages.

This is the way to bring the work of chemists to the lay public; it should be practiced every year. If an employer does not initiate it, why not the Section? Unless representatives of the press and influential civic and business leaders are invited the idea should be abandoned. To limit attendance to chemists and representatives of chemical industries would be no better than talking to ourselves.

Are Salaries Unprofessional?

It is true that most chemists other than consultants work for salaries. This is no argument against our professional status, because most teachers, many clergymen, some physicians and surgeons, many attorneys, and all judges receive salaries rather than fees without forfeiting their professional standing.

Our Academic Training

The academic background of chemists varies, but it does not vary as greatly as that of members of the teaching profession. Varying educational backgrounds are also characteristic of the clergy, but no one in his senses would challenge the professional status of clergymen. Furthermore, who is so naive as to presume that all physicians and surgeons have identical educational backgrounds? It is well known that there is wide variation in the academic training of our lawyers. In consequence, it must be agreed that variations in the scholastic training of chemists is no ground for claiming that the practice of chemistry is not a professional activity.

A pertinent, but seldom mentioned, side issue results from the unfortunate fact that some non-ACS-accredited colleges give B. S. degrees "in chemistry" to students who do not take the minimum number of chemistry courses required by accredited universities. While such graduates may be qualified to enter graduate colleges under special probationary arrangements, industry employs them for non-professional tasks as technical assistants, laboratorians, and the like. This unfortunate situation tends to confuse the issue of the chemist's professional status in the eyes of the general public. The public, with good logic, assumes that a B S. degree "in chemistry" from one college or university is the equivalent of that from any other.

Since educating the general public on the meaning of U.S. college and university degrees is an impossible task, we must concentrate on making this information available to high school students. Education committees of local sections, working closely with national headquarters, should provide our high school chemistry teachers, librarians, and guidance officers with lists of ACS-accredited colleges and universities. Our education committees should also furnish the high schools with information about non-accredited colleges that refuse to give watered-down degrees. Competent speakers provided by these committees should acquaint prospective chemistry majors with degree requirements, employment opportunities, and salary schedules. These speakers should present frank and honest information about both advantages and disadvantages of careers in chemistry. If we do less than this we are failing to act as professional people.

Our Dignity Has Improved

We chemists have recently made progress in improving our professional dignity. We have built an ACS Headquarters Building that meets the standard of dignity expected of a leading professional association. Recently a Division of Public, Professional, and Member Relations was organized; apparently this Division will function as a committee attached to ACS Headquarters. Appointing a committee does not solve a problem. It merely recognizes the problem's existence, because a new committee is like a new Sea Lord who must prove his worth or be replaced. A Symposium on Development of Professional Attitudes was held at the Atlantic City meeting (Fall, 1959). The Symposium's purpose was to define terms and get ideas on the subject from professionals in other disciplines. Published reports on this Symposium (C&EN, 28 Sept. 1959, p. 23; *Chem. in Canada,* Nov. 1959, p. 103) indicate that the major advice from another discipline came from Mr. Andrew S. Watson who is an alienist on the staff of the Uni-

versity of Michigan. When evaluating Mr. Watson's advice, we should bear in mind the opinion of Einstein — "Lucky psychiatrists, they don't have to prove anything."

Mr. Watson told us that it is difficult to see how chemists can hope for the prestige, status, and mildly magical aura that surrounds doctors [1], lawyers, and some other groups, because in general we deal with things rather than people. He maintained that these things affect society only indirectly. Apparently, Mr. Watson believes that "miracle drugs," high energy fuels, synthetic rubber and fibers have only an indirect effect on society. If we are convinced that these things do affect society in an indirect manner only, we should accept Mr. Watson's thesis and promptly abandon all thought of attaining the same degree of professional prestige and status that is held by lawyers. If we believe that these things constitute dynamic forces exerting direct and almost unbelievable influence on every citizen, we should reject Mr. Watson's advice in toto and take steps to inform our fellow citizens of the chemist's role in society.

We should consult experts in sociology, public relations, and advertising to obtain advice on effective methods to use when telling our story to the public [2]. When selecting these consultants we should make absolutely certain that they have some understanding of the work we do, that they are aware of the impact of chemical progress on all humanity, and that they are friendly to our aspirations. Perhaps a top-flight advertising man, after proving his value to us, could be retained as an advisor to our new Division of Public, Professional, and Member Relations.

The ACS, in considering professional dignity, has given serious attention to the use of academic degrees as part of the signatures of authors of technical papers. Apparently this grave issue has not been resolved. It seems reasonable that the time, effort, and money spent on this study could have been used to better advantage. Why not leave the form of signature up to the individual author [3]? Then he can sign his papers "John L. Doe, B.S., M.S., Ph.D., F.R.P.S., P.E.," "J. Llewellen Doe, Esq.," or simply "J. Doe" so long as he does not violate professional ethics by claiming a degree, membership, or licentiate that he does not hold.

Unwritten Rules of Ethics

It is true that our rules of ethical conduct are not codified, but neither

(1) The summaries in C&EN and CIC did not specify whether Mr. Watson meant all doctors or those who hold some special degree such as Ed.D., LL.D., or D. es S.

(2) Publication in journals such as C&EN and local section publications constitutes talking to ourselves, for few non-chemists read these publications

(3) Another system wherein the editorial staff placed the prefix "Dr." before the names of authors known to hold the doctorate has been used in some issues of the *Southern Chemist*. The success of this procedure is questionable.

is the Common Law nor the UK's Constitution; yet these are amongst the world's most effective institutions governing the conduct of man.

We Cannot Enforce Professional Discipline

The charge that we have no way of enforcing our rules of ethical behaviour is as true as it is serious [4]. It is well known that there are deliberate misrepresentations in some publications and patents, and occasionally an individual claims a degree that he does not hold. Nevertheless, we have no course of professional action constituting the chemists' equivalent of the lawyers' action to disbar or otherwise discipline a lawyer for unprofessional conduct. Now is the time for us to rectify this situation. We must scrap our dilatory tactics and face the issue. To do less is to abandon hope of reaching professional status.

Which Shall We Choose?

Today we chemists are approaching a fork in the path to progress. One fork leads to professionalism, the other to unionism. Which shall we take? Following the first path will require an all-out effort. The campaign necessary to inform the public about our work and the direct benefits that all people derive from chemical progress will be costly in terms of time and money. Providing adequate machinery for enforcing professional discipline will be neither easy nor inexpensive. We chemists must pay for this—*the public won't*. To follow the second path will take no effort on our part. All we need do is close our eyes and slide down hill into the arms of the waiting union leaders where we can join the brick layer, the coal miner, and the teamster as skilled workers. This sounds as easy as "plucking a pie from the sky." But somebody must pay for that pie by going out on strikes, walking picket lines, and having union dues withheld from pay checks. Which course shall we choose?

The 1960 Annual Meeting of the AAAS has been moved from Philadelphia to New York, N. Y., December 26-31.

(4) An incident that apparently involves a serious breach of ethics has been reported (*Chem. Week*, 2 Jan. 1960, p. 20). The account of this incident reads: "One example: it was recently found that 30 small firms were using one commercial lab to do their testing, and the lab was not carrying out the testing the way it claimed to be doing. Some inferior products got by as a result, though the drug firms could hardly be held responsible for not knowing they were being duped. This account does not state whether unprofessional conduct of Chemists in either the commercial laboratory or the drug firms was involved. Nevertheless, it emphasizes the fact that we have no method for investigating such incidents and enforcing professional discipline against chemists found guilty of culpable negligence, fraud, or gross incompetence when performing their professional duties.

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Communications

Thoughts on "Aging — a Positive Approach"

To the Editor:

Dr. J. A. Bjorksten (December 1959, CHEMIST) conceives the aging process to consist of a progressive cross linkage and insolubilization of proteins, chiefly the connective tissues. He suggests it as a point of attack on the problems of aging and staying resilient. It is a good generalization which can lead to much knowledge.

It recalls other hypotheses which led to unexpected developments. Brand and Kunkel in 1669 had the idea that aging was due to a gradual loss of some vital element in the excretions. On distilling the dried accumulated excretions, they made the discovery of phosphorus.

Then from early times, the slow poisoning by intestinal putrefaction was assumed a cause and led to attempts to change the intestinal flora, dramatically advocated by Metchnikoff and exploited commercially by a yeast company.

A shortage of vital ingredients in food as a cause of aging led to the development of amino acid, enzyme and vitamin studies. The discovery of adrenalin and its surprizing psychosomatic properties stimulated the theory of hormonal degradation, with the menopause in women an unsolved problem but the development of the Steinach operation for men a product of the theory. Work on hormones is active.

Raymond Pearl and T. Brailsford Robertson from statistical data attributed the aging process to cessation of growth as a product of internal growth working against a limiting environmental factor. Hoppe-Seyler, Jacques Loeb and others extended the information of cell structure by studies on the lecithins and nucleic acids, which is being vigorously carried forward under the stimulus of the impact of viruses.

Cellular mechanism, the composition of cellular dialytic membranes, and the growth of tissue in glass in a plasma medium, followed. I recall Dr. Eberhardt, assistant to Dr. Alexis Carrell, appealing to me for a thermostat sensitive to two thousandths of a degree to help maintain his chicken heart culture, which he had kept alive for fourteen years. Dr. Carrell was able to grow indefinitely all types of cell except nerve cells. His remark was that we paid the price of mortality by having brains.

At present some cardio-angiologists attribute atherosclerosis to an engineering condition of impact of the blood stream on the elbows of the arteries, with cholesterol acting as a weak cement.

The ubiquitous protein is involved in all tissues so that the hypothesis advanced by Dr. Bjorksten is a new and worthwhile approach. Careful scientific experiment with all safeguards is indicated.

—Dr. John A. Steffens, F.A.I.C.
Suffern, N.Y.

Not With Century Chemical

To the Editor:

I'd like to call attention to an error on page 145 of the April issue of THE CHEMIST, which is embarrassing, as I am in the consulting business for myself . . . I am doing some consulting for Century, but only for a few days a month.

—Dr. Hal G. Johnson, F.A.I.C.
New Canaan, Conn.

Secretaries Must Be Taught About Titles

(The following excerpts are from a letter directed to a company which failed to use the proper academic title.)

Dear Sir:

This is to acknowledge receipt of your letter . . . in answer to my request for more information on a novel technique . . . which your company advertised. . .

I was quite disturbed to find that, in spite of the recent publicity of the Committee on Professional Relations and Status of the American Chemical Society, in addition to letters and articles which have appeared in *Chemical & Engineering News* and

LABORATORY SERVICES
for the
FOOD and DRUG INDUSTRIES

DRUG EVALUATION,
FOOD ADDITIVE STUDIES,
CHEMICAL ASSAYS,
BIOLOGICAL ASSAYS,
CLINICAL STUDIES,
RESEARCH

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THE CHEMIST . . . , through secretarial ignorance or a poor attempt at humor on your part, your letter to me was addressed to Mr. Alex Sacher, Ph.D. and began with Dear Mr. Sacher . . .

I am forwarding copies of this letter to Dr. John K. Taylor . . . chairman, Committee on Professional Relations & Status of the ACS and to the editors of C&EN and THE CHEMIST, in the hope that it will be published at least in part . . .

—Dr. Alex Sacher, F.A.I.C.
East Rutherford, N.J.

On Certificates of Membership

To the Secretary:

I have received the very beautiful AIC membership certificate . . . and am very happy to have it.

— Dr. Nathan Weiner, F.A.I.C.
Richmond Hill, N.Y.

To the Secretary:

I feel highly honored in being made a Fellow of this outstanding organization, after being a member for many

years. Would like to express my thanks for the nice certificate . . . This is something I am very proud of and had hoped to receive some day . . .

—John A. Rieger, F.A.I.C.
Baltimore, Md.

Suggestion to Nominating Committee

To the Secretary:

I think it is unfortunate that there was not a single educator among the nominees for Councilors-at-large . . .

—Dr. H. B. Pierce, F.A.I.C.
Burlington, Vt.

Among Quotes

In the column "Inter Alia—Inter Nos" by P. J. Wood, F.A.I.C., in the *American Dyestuff Reporter*, Feb. 22, 1960, are quotations from THE CHEMIST, from articles by Dr. Arthur E. Wood, Dr. Thomas D. Fontaine and Dr. Lincoln T. Work.

A news article on the editorial, "The AIC Supports Qualified Clinical Chemists" (THE CHEMIST, Nov. 1959), appeared in the December 1959 issue of *Lab World*.

The Atoms for Peace Award for 1959 will be presented May 18, at the National Academy of Sciences, Washington, D.C., to Dr. Leo Szilard, professor of biophysics, University of Chicago, and Dr. Eugene Paul Wigner, professor of mathematical physics, Princeton University. The Atoms for Peace Award for 1960 will also be presented then to Dr. Alvin M. Weinberg, director of the Oak Ridge National Laboratory, and to Dr. Walter H. Zinn, vice president, Combustion Engineering, Inc.

Dr. James R. Killian, Jr., chairman of the board of Trustees of the Atoms for Peace Awards, Inc., a corporation sponsored by the Ford Motor Co. as a memorial to Henry and Edsel Ford, said that all of the scientists had shared in the development of nuclear reactors. Drs. Szilard, Wigner, and Weinberg have been active participants in the Pugwash Conferences. Each presentation consists of a gold medallion and $37,500.

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About AIC Members

Dr. W. S. Guthmann, F.A.I.C., in charge of special projects at Morton Chemical Co., Chicago 6, Ill., has been elected a director of Metal Hydrides, Inc., of Beverly, Mass. He is also chairman of the AIC Chicago Chapter.

Ely Balgley, F.A.I.C., is now with United Carbon Co., 410 Park Ave.,New York 22, N.Y.

(And see Page 187)

Prelude to the Present

of The American Institute of Chemists

(These rather random notes about the AIC, taken from The Chemist, were presented by the Editor at a meeting of the Alabama AIC Chapter, Aug. 8, 1959, at Birmingham, Ala. They are printed here at the request of AIC President Kuhn.)

THE AIC was founded in 1923 by a small group of far-seeing chemists and chemical engineers who knew that the infant chemical industry in the United States needed a strong profession to develop it.

Our second president, Dr. M. L. Crossley, Hon. AIC., formalized our objectives in 1924, in practically their present form. He defined a chemist as "a person who is qualified by education and experience to ascertain the facts of chemistry and to interpret them so as to benefit humanity and accelerate progress." (1)

The AIC is a dynamic and living organization. Some of the problems existing when it was formed are not present now, though others are, and new problems have arisen during the years. One of the early problems was the great number of pretenders to the title, "chemist." As Dr. Ivor Griffith, F.A.I.C., noted, "There is no . . . recognition accorded the term chemist." (2) A correspondent complained, "Frequently chemists who have earned the right to enter the profession are unable to do so because (employers) hire high school graduates, teach them some routine manipulations, and call them chemists." (3) Our longtime Secretary, the late Howard S. Neiman, F.A.I.C., said, "The word chemist often means nothing to those desiring an expert opinion or a correct analysis as it is frequently employed by those totally lacking in chemical education. These pseudo-chemists prey both upon the public and the trained chemist to the injury of both." (4)

As a result, public recognition of chemists was nearly non-existent. Our former president, the late Dr. Robert J. Moore, F.A.I.C., (father of Richard L. Moore, F.A.I.C.), revealed, "The Navy at one time classed chemists with painters, and New York City listed them with the garbage collectors." (5) Until 1936, the American Chemical Society did not restrict membership to qualified chemists but admitted any reputable person interested in chemistry. Some 18,000 members of the ACS were admitted on this basis. (6) Thus the AIC requirements of education and professional experience at once distinguished those belonging to it as professional persons.

Who are the people who belong to the AIC? Dr. W. T. Read, Hon. AIC., long active in AIC affairs, said, "The AIC is not a large organization. Neither is a catalyst bulky in terms of the substances whose reactions it influences. The AIC has al-

ways functioned as a catalyst. Its members are leaders, key people in the profession, who have operated quietly, modestly, but very effectively for the benefit and advancement of the profession." (7)

Our recent president, Dr. Henry B. Hass, F.A.I.C., put it this way: "I suspect the AIC will always be a minority group of originators, the needlers, the independent thinkers, the leaders, the indispensable yeast . . . If chemistry ever reaches its full stature in the United States, it will be because this group led the way." (8)

Our former president, Lawrence Flett, Hon. AIC., reminds us that if we name the great educators, great industrialists, Nobel prize winners, literature experts, consultants, teachers, government men . . . we will find representatives of each in the AIC. But we are not confined to the great, nor is the profession made by the great alone. Persons qualified to represent the profession in many ways are members. The younger chemists find these associates of tremendous advantage to them.

Who joins the AIC? Our recent president, Dr. Ray P. Dinsmore, Hon. AIC., says that only 15 per cent of all chemists have enough vision to be interested in the intangibles of professionalism. The late Dr. Joseph F. X. Harold, F.A.I.C., said:

"Let me tell you what a chemist is:

"Deep in the uttermost roots of the universe the chemist finds his work and play. His is the mind that finds the key to the secrets of rock, and leaf, and cell, and star. Everything that is, is within his ken and is the better for his touch. All sciences rest upon him; to all arts he gives their tools . . . The instant Chaos felt the urge to form there was matter for his inquiry; and when at last this glorious globe blows up, some note-taking chemist, with mind and pencil equally alert will fill his book with observations for the Great Schoolmaster, the last schoolboy to go lingeringly away from the old universe, conquering fear by the habit of looking and learning . . .

"And yet these divine kings, who can command of the god Vulcan his fires, and of Boreas his cold, have in the community the definiteness of a fog-bank . . . As a craft they have the solidarity of water in a sieve, the group consciousness of a pack of balloons, the fraternal spirit of a Geneva Conference, and the cooperation of the two Portlands!" (9)

What are some of the things the AIC has done? First it has established qualifications for the profession, and it has emphasized professional problems until other societies became interested in them. It has evolved a Code of Ethics which is binding upon its members. During the Depression it sponsored (with other groups) the Committee on Unemployment and Relief for Chemists and its successor, the Chemist Advisory Council, which rendered yeoman service to chemists. Our long-time members, M. R. Bhagwat, F.A.I.C., Frank G. Breyer, Hon. AIC., Dr. W. T. Read, Hon. AIC, the late A. Cressy Morrison, Hon. AIC., and others, were active in this. (10)

The AIC has aided education in many ways. For example, Dr. M. L. Crossley, Hon. AIC., as chairman of our Committee on Education, prepared, in 1931, a detailed report outlining the courses essential to a chemist's education, published in THE CHEMIST, June 1931. Copies were sent to 568 colleges and universities, many of which replied, accepting the recommendations. Recently, the New Jersey Chapter has materially aided the Teachers Colleges of that State. (11)

The AIC has watched legislation for many years with the aid of committees, Chapters, and individuals. When the Copeland Bill (1935) for revision of the Federal Food and Drugs Act omitted chemists from the definition of persons capable of rendering "scientific opinion," the AIC protested the omission of chemists in the term scientific opinion . . . "The scientific opinion of chemists is certainly entitled to the same recognition as that of pharmacologists, physiologists, and toxicologists." (12)

In 1947, Delaware Senate Bill No. 75 attempted to limit the supervision of the manufacture of drugs, medicines, toilet preparations, dentifrices, or cosmetics, in the State of Delaware solely to registered pharmacists. The Council protested this bill which was stricken from the Delaware Senate Calendar. (13) A year later, the Department of Health of Ohio proposed regulations requiring that the director of a clinical laboratory be an M.D. We protested. This regulation also failed. (14) Chapter members are in a particularly good position to watch state legislation and report it to Maynard J. Pro, F.A.I.C., who is the present chairman of our Committee on Professional Legislation.

From time to time, the Chapters and the national organization have brought about beneficial changes in the U. S. Civil Service Commission Classification standards for chemists or state and city standards and salaries. (15) The Chicago Chapter formed an employment advisory service for persons who contemplate working for any given chemical company, whereby they can find out what they may expect from a company before they start working for it. (16)

Dr. Sidney D. Kirkpatrick, Hon. AIC, says that "The AIC was the first of our chemical organizations to discover that chemists are human beings—that we can advance as individuals and as a profession only as we make friends and influence people." (17) The AIC has long stressed individual personality development, the understanding of other people, the ability to communicate. Many articles in THE CHEMIST have dealt with these personal matters.

The AIC has also contributed to the patent system and it continues to be interested in these matters. For

instance, in 1936, when the patent system was being revised, President Roosevelt invited to his home at Hyde Park our president, the late Dr. Maximilian Toch, Hon. AIC., to discuss the patent system with him. One of the AIC recommendations was that judges should have technical or scientific advisors on the bench. [18]

The AIC first suggested that a national survey of chemists be made. The idea was originally embodied in a report, in 1934, by M. R. Bhagwat, F.A.I.C., for the Committee on Unemployment & Relief. In 1935 it was informally discussed with the Department of Labor. And in 1938, the Washington AIC Chapter and the national Council formally proposed to the Department of Labor that a national survey of chemists be made. [19] This idea bore fruit in 1939 when representatives from the AIC, the ACS, and other groups worked with the Department of Labor to plan this survey. [20]

Then in January 1941, the Washington AIC Chapter (Committee members: A. L. Mehring, F.A.I.C., F. O. Lundstrom, F.A.I.C., and L. F. Rader, Jr., F.A.I.C.) prepared the only general survey of the chemical profession which had been made up to that time. Modestly, they entitled it, "A Partial Survey of the Chemical Profession with Particular Reference to the Washington AIC Chapter." [21] There were many requests for this survey, including one from the War Manpower Committee in 1942. [22]

Many AIC members served on Government Boards during the War. The AIC continually stressed the profession. Dr. Joseph W. E. Harrisson, F.A.I.C., for example, then president of the Pennsylvania Chemical Society, found it necessary to recommend to the Governor, the president of the Senate and the speaker of the House of the State of Pennsylvania, that the State Council on Defense should have appointed to it at least one chemist! [23] Information was supplied to employers about the affidavits needed to retain chemists called up by the Selective Service Act [24] and the AIC urged draft boards to conserve chemists. [25]

For many years the AIC has studied employment contracts for chemists, and from time to time its committees have prepared suggested contract forms that have been requested by many firms. The most recent suggested contract appears in the June, 1954, issue of THE CHEMIST.

The encroachment of labor unions upon professional people is another topic that has been discussed and watched. Many articles on various phases of this subject appeared in THE CHEMIST from 1944 to 1946. The late Dr. Gustav Egloff, Hon. AIC, then our president, stated, "The AIC is not a labor union; it does not want to belong to a labor union; it

has no sympathy with labor unions for the professional man. It does want to raise the professional status of the chemist by professional means." (26) (Today, the labor union problem is still with us!)

In 1946, the AIC supported the Magnuson (Bush) Bill which created the National Science Foundation. (27) But this idea was anticipated in 1941 by Dr. Donald H. Andrews, F.A.I.C., when he called for a national effort to support a program for the training of scientists; a program of national fellowships to provide for the education of those who have innate scientific ability; and a national program to improve science teaching. (28) An editorial in the *New York Times* (Nov. 24, 1941) commenting on Dr. Andrews' paper, stressed the need of more activity by professional societies to meet the demand for technically skilled men for the war effort. (29)

In the days after the war, there was much fear expressed that the demand for chemists would greatly decrease. The AIC stood almost alone in its conviction that there would be a greater demand for chemists after the war than ever before. (30)

These are but a very few of the things that the AIC has done. There are many more specific things, and a whole world of indirect things that have added to the chemist's professional stature. For the most part, we are far too busy with the present to look back to see what we have done. In fact, this paper is not even up to the present yet, and it has not told about many fine people who have worked through the AIC on many professional projects, nor about our presidents, each of whom has brought his own distinctive talents to further our professional endeavors.

References

(All to THE CHEMIST)

(1) Jan. 1935, p. 7
(2) Mar. 1944, p. 126
(3) May 1941, p. 231
(4) Nov. 1935, p. 328
(5) May 1946, p. 199
(6) Oct. 1939, p. 331
(7) Aug. 1958, p. 375
(8) June 1958, p. 289
(9) Dec. 1939, p. 405
(10) May 1935, pp. 245-46
(11) Jan. 1955, pp. 27-28
(12) Sept. 1935, p. 268
(13) June 1947, p. 237
(14) July 1948, p. 343
(15) Mar. 1935, p. 239
Mar. 1937, p. 66
Oct. 1946, p. 379
and other issues
(16) May 1950, p. 173
(17) June 1950, p. 215
(18) Nov. 1936, p. 749
(19) April 1938, p. 195
May 1938, pp. 249-55
(20) May 1939, p. 267
(21) Jan. 1941, pp. 5-23
(22) Nov. 1942, p. 294
(23) Mar. 1941, p. 99
(24) Apr. 1941, p. 133
(25) May 1941, p. 175
Sept. 1941, p. 261
(26) Sept. 1944, p. 402
May 1946, p. 181
(27) Feb. 1946, p. 64
(28) Nov. 1941, p. 417
(29) Apr. 1942, p. 116
(30) Mar. 1945, p. 164
Feb. 1947, pp. 61-63
and other issues.

The American Institute of Chemical Engineers will meet with the Instituto Mexicano de Inginieros Quimicos at the Hotel Del Prado, Mexico City, Mexico, June 19-22.

THE AMERICAN INSTITUTE OF CHEMISTS

Annual Reports — 1959-1960

Report of the Secretary

The National Council held six meetings during the fiscal year, with an average attendance of seventeen officers and councilors.

The following actions upon membership were taken:

Elections

Life	0
Honorary	0
Fellows	89
Members	33
Associates	20
TOTAL	142

Reinstatements

Fellows	1
Associates	2
TOTAL	3

TOTAL GAIN — 145

LOSS OF MEMBERSHIP

Resignations

Fellows	28
Members	8
Associates	7
TOTAL	43

Dropped

Fellows	1
Members	2
Associates	7
TOTAL	10

Deceased

Emeritus Fellows	2
Life	3
Honorary	1
Fellows	19
TOTAL	25

TOTAL LOSS — 78

Total Gain in Membership	145
Total Loss in Membership	78

NET GAIN IN MEMBERSHIP — 67

Transfers

Fellows to Emeritus Fellows	14
Fellows to Honorary Members	4
Members to Fellows	67
Associates to Fellows	10
Associates to Members	42

TOTAL MEMBERS

	May 1959	*May* 1960
Fellows	2026	2127
Emeritus	94	106
Members	299	297
Associates	288	244
Life	39	36
Honorary	44	47
TOTALS	2790	2857

We have welcomed 145 new members, 90 of whom are Fellows, into the AIC between February 1959 and February 9, 1960. Those qualified persons who have applied for membership since February 9, when the most recent Council Meeting of the 1959-60 fiscal year was held, will be elected at the May 11 meeting of the Council, and are, therefore, not included in this Annual Meeting Report, but will be included in the report for the next fiscal year. This year we have a net gain of 67 members, as contrasted to a net loss last year of 13 members.

Honorary Membership

Honorary AIC Membership was conferred on the following Fellows this year: Dr. Lincoln T. Work, Dr. Jack P. Montgomery, and Miss Florence E. Wall. Honorary membership was also conferred, as is customary, on the Gold Medalist, Mr. Crawford H. Greenewalt.

Emeritus Fellows

In accordance with Article VI, Sec. 6 of the By-laws, the following Fellows were given Emeritus status:

Dr. Dwight C. Bardwell
Robert W. Belfit
John H. Beltz
Dr. Elton R. Darling
Helmut C. Diehl
Dr. C. H. Fiske
Arnold Kirkpatrick
Winthrop S. Lawrence.
Irvin R. MacElwee
Nicholas Opolonick
William A. Smith
Dr. LeRoy D. Soff

Necrology

It is with deep regret that we record the following deaths among our members:

Harry E. Bruce, F.A.I.C. (Life)
Dr. E. E. Butterfield, F.A.I.C.
John B. Calkin, F.A.I.C.
Lewis Davis, F.A.I.C.
W. H. Eisenman, F.A.I.C.
Dr. Charles S. Fazel, F.A.I.C.
Dr. Minnie A. Graham, F.A.I.C.
Dr. Lucien H. Greathouse, F.A.I.C.
Louis F. Koberlein, F.A.I.C.
Dr. T. W. Langer, F.A.I.C.
Dr. Stewart J. Lloyd, Charter F.A.I.C.
Thomas J. Lynch, F.A.I.C.
Dr. Herman Maisner, Emeritus F.A.I.C.
Royal Miller, F.A.I.C.
James W. Monks, F.A.I.C.
Dr. Walter J. Murphy, Hon. AIC
Dr. Cash B. Pollard, F.A.I.C.
Dr. George W. Schaeffer, F.A.I.C.
William H. Schaller, F.A.I.C.
Dr. Leonard Smidth, F.A.I.C.
Maurice C. Taylor, F.A.I.C.
Dr. Marvin J. Udy, Life F.A.I.C.
Leonard Wickenden, Charter F.A.I.C.
Prof. C. S. Williamson, Jr., Life F.A.I.C.
Lester Yoder, Emeritus F.A.I.C.

Cooperation with Other Societies

AIC Social Hours were held in connection with the American Chemical Society's meetings in Atlantic City and in Cleveland, Ohio, thus providing an opportunity for AIC members attending the ACS conventions to meet and renew friendships.

Dr. L. T. Eby served as delegate to the inauguration of Dr. Mason Welch Gross as president of Rutgers University, May 6, 1959. John Kotrady served as delegate to the Cooper Union Convocation, in New York, N. Y., Nov. 2, 1959.

Dr. W. E. Kuhn, AIC president, transmitted to all councilors and chapter chairmen testimony presented by the NAM before a Patents Subcommittee of the Science and Astronautics Committee of the House of Representatives, on the patent revision of the Space Act, a vital national issue.

The following representatives from the AIC to the Council of The American Association for the Advancement of Science were appointed: Dr. Milton Harris, president-elect, and John Kotrady, secretary.

The following representatives from the AIC to the Perkin Medal Committee of the American Section of the Society of Chemical Industry were appointed by the Council: Dr. W. E. Kuhn and Dr. Emil Ott with Dr. Henry B. Hass and John Kotrady as alternates.

The AIC was accepted as a nominating agency of the Scientific Manpower Commission and Dr. Kuhn and Dr. Harris were asked by the Council to nominate representatives to the Commission.

Chapter Rebates on New Members

The National Council voted to grant to the Chapters 40% of the first year's dues of all new members brought into the Chapter, whether they are obtained by Chapter initiative or otherwise.

Student Medals

The Chapters awarded a total of 158 Student Medals to outstanding college seniors in the Chapter areas. The list of medalists appears in the December 1959 issue of THE CHEMIST.

Chapters

Our President, Dr. Kuhn, visited many of the Chapters this year to provide direct contact between the national office and the membership.

Petitions to form nine new Chapters were accepted by the National Council during the year: Florida, Michigan, Pittsburgh, Tennessee, Beaver Falls, Wisconsin, Virginia, Western Connecticut, and Northwest. The Beaver Falls, Pittsburgh, and Florida Chapters have elected officers and have received their Charters. The other area groups are in various stages of being organized. These new chapters will give AIC members more opportunity to participate in AIC activities. The Committee on New Chapters and Expansion, headed by the energetic Martin Williams, is assisting with the formation of other Chapters, and has also formed a "200 Club," now containing over 200 members who will each endeavor to bring in at least 10 qualified members in 1960.

Most of the Chapters have completed a year of successful accomplishment, which will be shown in their individual Chapter reports. The newly created Florida, Beaver Falls, and Pittsburgh Chapters have already distinguished themselves for interesting activities.

Status of Members

Some of our Members and Associates have been in the AIC long enough to have acquired the necessary progressive experience needed for transfer to a higher grade of membership. A slip was enclosed with the dues' statements for 1959 calling this to their attention. As a result, 42 Associates were raised to Members; 10 Associates were raised to Fellows, and 67 Members were raised to Fellows.

Committees

The Committee on Public Relations, headed by Richard L. Moore, has made available to us public relations services without cost. This Committee in cooperation with Dr. L. T. Eby of the Committee on Membership is preparing a new brochure about the AIC. The fine work of other committees will be found in the Annual Reports of the Committee Chairmen.

The 36th Annual Meeting

The New York and the New Jersey Chapters were our hosts for the 1959 Annual Meeting, held in Atlantic City, N. J., May 9-11, 1959. The meeting was distinguished by outstanding national speakers, a fine ladies' program, good fellowship, and perfect weather. Mr. Crawford H. Greenewalt, president, E. I. du Pont de Nemours & Co., received the 1959 Gold Medal.

Retirement of Our Secretary

Dr. Lloyd Van Doren, Charter and Life Fellow, who served unselfishly from Nov. 1945 to Sept. 1959, re-elected at intervals by an appreciative membership, retired as Secretary, September 13, 1959. His resignation was regretfully accepted. By unanimous vote of the Council, John Kotrady, F.A.I.C., was appointed to fill the position during the remainder of Dr. Van Doren's term of office, which expires in May 1960.

Resolutions and Special Motions

A resolution, prepared in the form of a Testimonial Scroll, was passed by the National Council in appreciation of the many services of Dr. Lloyd Van Doren as secretary from Nov. 1945 until his retirement in September 1959. Dr. John L. Wilson, National Council Representative from the Twin City Chapter, personally presented this Scroll to Dr. Van Doren, in Tempe, Arizona, Jan. 16, 1960.

A resolution on the death of Dr. Walter J. Murphy, Hon. AIC, former treasurer of the AIC, long on the Advisory Board of THE CHEMIST, and the Gold Medalist for 1950, was adopted by the Council and sent to his family.

At the 36th Annual Business Meeting a motion was approved to the effect that the AIC supports the right of qualified clinical chemists to operate clinical laboratories without the supervision of members of other professions. The motion has aroused much interest in other pertinent societies and publications.

Also at this 36th Annual Business meeting, a resolution emphasizing the professional status of chemists and chemical engineers was adopted.

AIC Information Center

An AIC Information Center in connection with The Chemists' Club Library, New York, N. Y., was initiated by President Kuhn and former President, Dr. Lincoln T. Work. This proposed collection of information will contain reprints on professional subjects; books dealing with professional material, and information gathered from companies on typical contracts, application forms, rules and regulations concerning employment and other professional matters.

Departments in THE CHEMIST

President Kuhn announced that a section of THE CHEMIST would be devoted to information about legislation, and another section to reprints and references to professional material of interest.

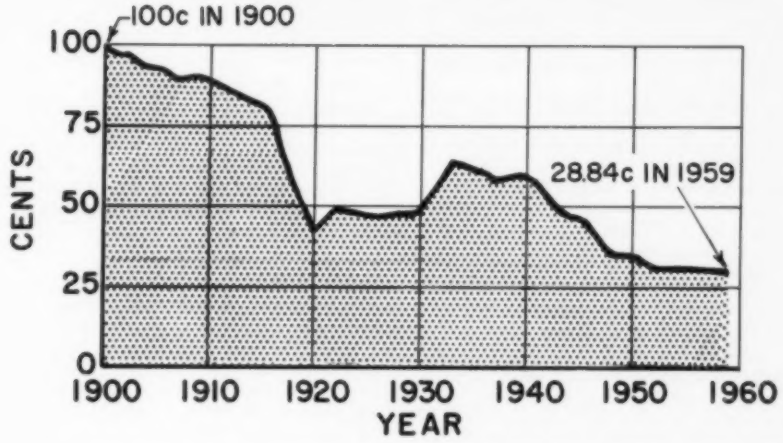
In Appreciation

We express our deep appreciation to all those AIC members who have given their personal time and effort, through Chapters, Committees, or in individual service, to advance the professional status of chemists and chemical engineers.

To our President, Dr. Kuhn, we express our appreciation for his conscientious and dynamic leadership, which have enabled him to advance the objectives of the AIC during this year of accomplishment.

—John Kotrady, Secretary

THE DECLINING VALUE OF THE DOLLAR



The American dollar is worth less today than at any time in history; less than when our Constitution was adopted.

In this 20th Century, within the lifetime of many persons still working, the purchasing power of the dollar has dropped from 100 cents to less than 29 cents, as shown in the above graph. The value of savings and pensions and insurance has dropped accordingly.

This is how inflation destroys the rewards of hard work and thrift.

This is how prices have been pushed up.

This is one reason that taxes keep going up.

This is a fact of life that should be understood by every American.

—Chamber of Commerce of the U.S.

Professional Material Available

(Free unless otherwise noted)

"Food Additives — New Law Causes Many Problems." By Dr. Bernard L. Oser, F.A.I.C., Food & Drug Research Labs., Inc., N.Y., N.Y. Reprint from C&EN, Feb. 15, 1960. 1-10 copies, $0.50 per copy. Special rates for multiple copies. Order from Reprint Dept., C&EN, 1155 16th St., N.W., Washington 6, D.C.

"New Personnel File Folder." Incorporates a standard employment application form. Literature available on request from APTITESTS, 31 So. Carpenter Ave., Indiana, Pa.

"Science & Engineering in American Industry. Report on a 1956 Survey," issued April 19, 1960, by National Science Foundation. $0.70 from the Sup't. of Documents, U.S. Gov. Ptg. Office, Washington 25, D.C.

"A Dover Science Sampler." A collection of quotations from scientists, classic and modern, including Newton, Galileo, Poincare, Bertrand Russell, George Sarton, and many others. Request from Dover Publications, 180 Varick St., New York 14, N.Y.

"Your Career as an Aero/Space Engineer." Career guidance manual. Request from Institute of Aeronautical Sciences, Student Activities, 2 E. 64th St., New York, N.Y.

On Legislation

"Statement of Chester L. French on Behalf of the MCA before the Committee on Interstate & Foreign Commerce, U.S. House of Representatives, in Support of H. R. 5260." Request from Manufactur-

ing Chemists' Association, Inc., 1825 Connecticut Ave., N.W., Washington 9, D.C. (H.R. 5260 concerns precautionary labeling of hazardous household products.)

"Tax Rate Reform — Passport to greater and solid economic growth." A progress report by the authors of H.R. 3000 and H.R. 3001, calling for comprehensive reform of federal tax rates and methods. 10 cents from U.S. Junior Chamber of Commerce, Boulder Park, Box 7, Tulsa, Okla.

"Proposed Revisions to the Patent Section, National Aeronautics & Space Act of 1958." Report of the Subcommittee on Patents and Scientific Inventions to the Committee on Science and Astronautics, U.S. House of Representatives, March 8, 1960. Request from the Committee or from your Congressman.

"Extract from Tax Revision Compendium — Statement of Lewis E. Harris, President, Harris Laboratories, Inc., Lincoln, Nebr. — Compendium of papers on broadening the tax base submitted to Committee on Ways & Means". Request from the author.

Opportunities

Doris Eager, M.A.I.C.

Chemists Available

Managerial — Product Development & Commercialization: F.A.I.C., Ph.D. Physical, outstanding record Research Administration & Sales. 21 years polymers, cellulose pulp, fibers, films. Phi Beta Kappa. Honors. Publications. Heavy overseas experience, multi-lingual, many commercial processes and patents. Box 50, THE CHEMIST.

F.A.I.C. Ph.D. Background includes teaching and industrial experience. Desires position in organic/agricultural chemistry, research and/or production. Especial interest—work involving meeting the public, speaking or writing. Box. 52, THE CHEMIST.

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Chemical engineer. M.S. essential, Ph.D. desirable, to head section of Western Research Department, supervise pilot plant program, develop new, improved processes for manufacture of high-energy fuels. Should have supervisory experience in process development & pilot plant operations; familiarity with manufacturing & engineering operations desirable. Experence in organic, petrochemical, complex inorganic, or specialty chemicals field and boron chemistry, desirable. Salary $15,000-$17,000. Box 51, THE CHEMIST.

Doctorate in chemistry, interested in joining the faculty of Texas College, write Allen C. Hancock, Dean, Texas College, Tyler, Texas.

Pharmaceutical chemist with Ph.D., to head the Pharmaceutical Research & Development Section. Duties, new product development improvement of existing products, and research ideas for new products. Should have administrative ability, able to direct and coordinate research projects. Location Midwest. Salary around $10,000. Box 53, THE CHEMIST.

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Dr. Donald F. Othmer, F.A.I.C., chairman, Scholarship Committee of The Chemists' Club, New York 17, N. Y., announces that the Club has income from trust funds available as awards to two high school chemistry teachers to be chosen from the New York metropolitan area.

Percy E. Landolt, F.A.I.C., consulting engineer, has moved his office to 598 Madison Ave., New York 22, N. Y.

Bernard Berkeley, M.A.I.C., has been promoted to director of the Product Development Department of Foster D. Snell, Inc., New York 11, N. Y.

Dr. W. A. LaLande, Jr., F.A.I.C., vice president and technical director, Pennsalt Chemicals Corp., announces that a new Research Products Development Department has been formed as part of the firm's Technical Division. Dr. John F. Gall has been appointed manager of the new department.

Dr. Ray P. Dinsmore, Hon. AIC, vice president in charge of research and development of Goodyear Tire & Rubber Co., has been elected a director of the company. He joined Goodyear in 1914.

Dr. Charles Allen Thomas, Hon. AIC, president of Monsanto Chemical Co., since 1951, has been elected chairman of the board. He succeeds Edgar M. Queeny, who remains a director and member of the executive committee.

James M. Margolis, M.A.I.C., head of Chemical Marketing & Research Co., New York, N. Y., announces that the company has completed a multiple client, nationwide survey of the adhesive market for synthetic resins and elastomers.

Dr. Ernest M. Weber, F.A.I.C., is now executive director of research and development, Chas. Pfizer & Co., Inc., Groton, Conn.

Henry Harrison, F.A.I.C., formerly with Oakite Products, Inc., is now technical director for the W. D. MacDermid Chemical Co., Bristol, Conn.

George Tobiasson, AIC Charter Member, recently completed forty years of service with Universal Oil Products Co., Des Plaines, Ill.

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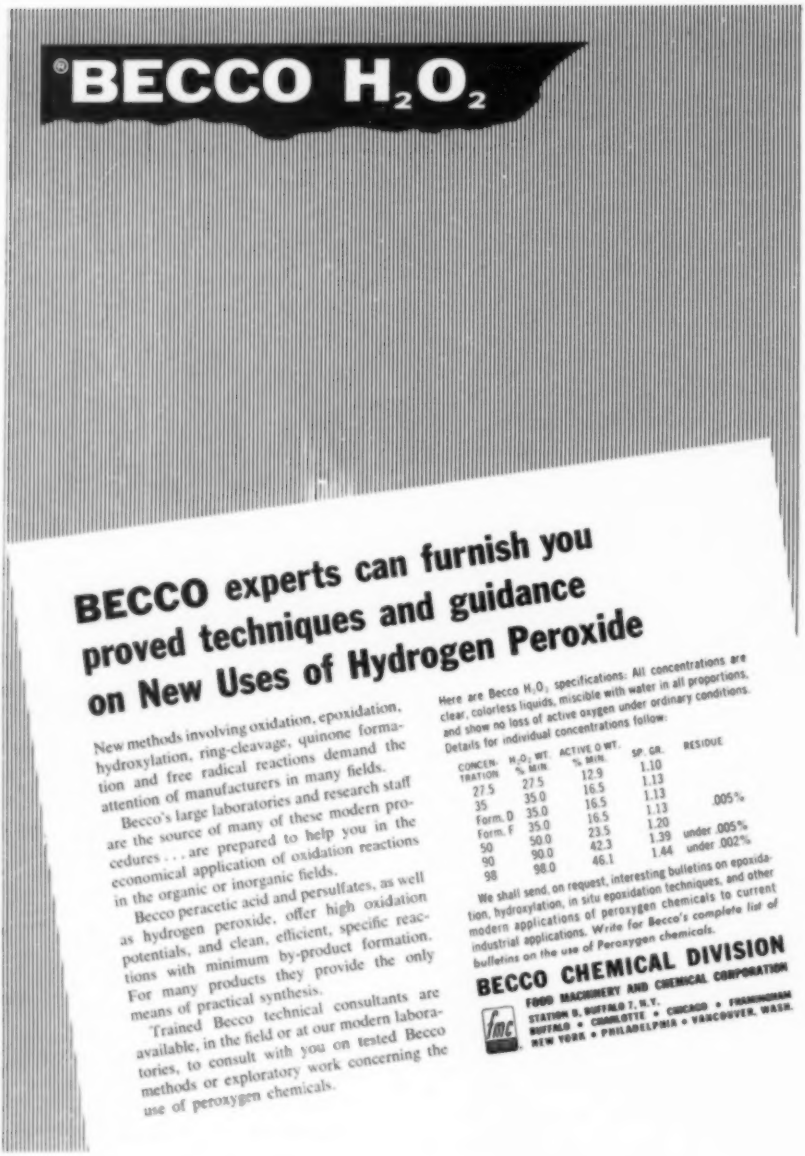

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Form. D	35.0	16.5	1.13	.005%
Form. F	35.0	16.5	1.13	
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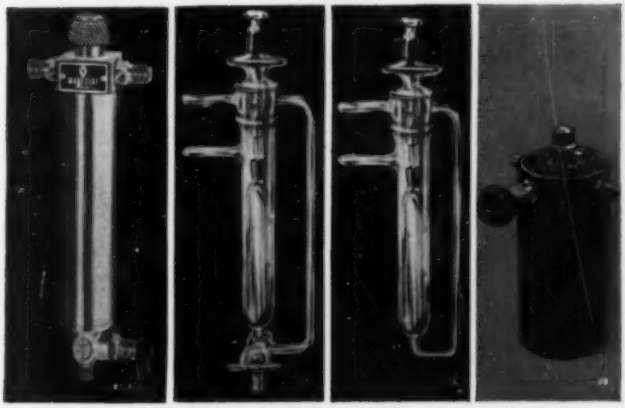

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